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"Gaming" the System: Study Looks at Standards for Small-Arms Waivers for Patients on Antidepressants

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By Naval Center Combat & Operational Stress Control Public Affairs



A Sailor plays the video game, *Lethal Enforcers*, during the SSRI small arms study. While playing the game participants use a plastic light pistol to shoot foes, and avoid shooting friends, as they appear on screen in such different scenarios as target practice, a bank robbery or a getaway.

Can a video game influence Navy policy? Cmdr. Rob McLay and Lt. Cmdr Heather Kurera, psychiatrists at Naval Medical Center San Diego, think so. With the help of researcher Massoud Nikkhoy of the Naval Center for Combat and Operational Stress Control, the study seeks to provide data to determine the effects of Selective Serotonin Reuptake Inhibitors (SSRIs) – commonly known as antidepressants – on a Sailor's ability to safely use small firearms.

Current Navy policy states that no Sailor being treated with SSRIs may carry a

firearm or deploy unless granted a waiver by a psychiatrist. "A couple of years ago, we realized we had no objective standards for when it is – or is not – appropriate to grant such a waiver," says McLay. He conceived of the study and then brought it to Kurera, who now serves as principal investigator.

The study plans to enroll at least 100 participants through two phases of testing – before and after the administration of SSRIs. Each session consists of two tests: a Palm Pilot-administered measure of reaction time, concentration and judgment (Automated Neuropsychological Assessment Metrics, or ANAM), and – the fun part – a video game called *Lethal Enforcers*, in which participants use a plastic light pistol to shoot foes – and avoid shooting friends – as they appear on screen in such different scenarios as target practice, a bank robbery or a getaway.

While the SSRI study is cutting edge, the video game itself decidedly is not. *Lethal Enforcers*

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is played on a 15-year-old Sega Genesis system. Compared to contemporary games, *Lethal Enforcers* looks comically outdated. There is, however, good reason for using the Sega Genesis instead of its modern contemporaries.

For one, use of an outdated game significantly decreases the likelihood that participants would have played the game at home – eliminating learned skill as an unwanted variable in the study. More importantly, the older technology is actually *more* accurate for this particular scenario.

“The newer technology won’t let you use a light gun,” says McLay. “When you use a Nintendo Wii, you’re using a motion sensor, which may or may not be lined up with where the gun goes so you can’t really test the same way in terms of ‘aim-shoot’ on an accurate target on the newer systems.”

The Sega, if all goes as planned, will be replaced by more realistic simulators as a part of a larger study.

“Right now, we’re just trying to provide preliminary data on these issues,” McLay says, and eventually, no simulators at all because his hypothesis imagines that the psychiatric symptoms themselves will predict performance in firearm use.

“The neuropsychological measures will be used as a surrogate for the actual firearms performance,” he adds. “In other words, we’re not thinking that down the road every psychiatrist will need to use simulators.”

“Firearm use really boils down to reaction time, impulse control and hand steadiness. These traditional psychiatric measures should be able to predict your ability to shoot straight — and shoot the right people.”

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